

IN THE CLAIMS

1. (currently amended): A wafer grinder, comprising:

a base structure;

a housing module, having including a holding body, the housing module being [[and]] fixedly positioned on the base structure of the wafer grinder;

a rotary worktable module, having including a worktable body and a spindle rotatably positioned on the wafer grinder, wherein the rotary worktable module has includes a wafer holding sub-module;

an air pressure spindle protection bearing module, positioned on the holding body and having including an air channel to direct an airflow with a certain pressure to the housing module and the rotary worktable module to act as an air cushion spindle to support the worktable body and the spindle; and

an adjustment module, positioned on the holding body and having including a piezoelectric actuator and a displacement meter;

wherein a longitudinal rotation between the spindle and the worktable body has includes an air padding to offset a lateral force during a grinding process.

2. (currently amended): The wafer grinder as claimed in claim 1, wherein the holding body has includes an auxiliary groove to facilitate machining base structure an airflow hose.

3. (currently amended): The wafer grinder as claimed in claim 1, wherein a the base structure of the wafer grinder is a conventional civil structure for setting up a machine.

4. (currently amended): The wafer grinder as claimed in claim 2, wherein the wafer holding sub-module is positioned on the worktable body of the rotary worktable module and ~~has includes~~ a vacuum nozzle and a pump hose.

5.(original): The wafer grinder as claimed in claim 1, wherein the spindle is connected to the worktable body to rotate the worktable body.

6. (currently amended): The wafer grinder as claimed in claim 4, wherein the rotary worktable module further includes an adjustment sub-module positioned within the worktable body, and the adjustment sub-module includes an adjusting screw to block ~~longitudinally radially~~ the vacuum nozzle to adjust to wafers with different sizes.

7. (currently amended): The wafer grinder as claimed in claim 1, wherein the displacement meter and the piezoelectric actuator are placed in a same concentric geometrical position.

8. (currently amended): The wafer grinder as claimed in claim 7, wherein three pairs sets of piezoelectric actuator ~~and with the~~ displacement meter are positioned at a bottom of the worktable body by a same uniform angle separation to adjust a tilt angle of the worktable body.

9. (currently amended): The wafer grinder as claimed in claim 1, wherein the spindle is driven by a flexible, belt ~~[-]like~~ structure to prevent a shock of rotation from being transmitted to the spindle.

10. (currently amended): The wafer grinder as claimed in claim 9, wherein the spindle further includes a rubber coupling and a timing plate belt pulley so that the rubber coupling connects with the timing plate belt pulley and motor power is delivered transmitted by to input timing plate belt pulley.

11. (currently amended): The wafer grinder as claimed in claim 1, wherein further comprising the disc spring generates a pre-compressive force on the piezoelectric actuator.